

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-51 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for compounds of the formula I wherein M is a Group VIIIB metal, does not reasonably provide enablement for compounds of the formula I wherein M is a Group VIB metal. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.
4. For a rejection under 35 U.S.C. § 112, first paragraph the following factors must be considered. *In re Wands*, 8 USPQ2d 1400, 1404 (CAFC, 1988):

- 1) Breadth of the claims
- 2) Nature of the invention
- 3) State of the prior art
- 4) Level of ordinary skill in the art
- 5) Level of predictability in the art
- 6) Amount of direction and guidance provided by the inventor

7) Existence of working examples

8) Quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The breath of the claims involves catalysts and organometallic ligands (ferrocenyl type) used in the carbonylation of ethylenically unsaturated compounds as well as their preparation. The nature of the invention is in the field of catalysis.

The state of the art shows the use of ferrocenyl type ligands as part of the catalyst systems in the carbonylation reaction. See WO 96/19434 and EP 0 662 467 A1, both cited by Applicants. The level of ordinary skill in the arts is high and limited to the preparation of supported metal catalysts.

The predictability or lack thereof in the art refers to the ability of one skilled in the art to extrapolate the disclosed or known results to the claimed invention. The lower the predictability, the higher the direction and guidance that must be provided by applicant. In the instant invention the predictability is very low and consequently, the need for higher levels of direction and guidance by applicant. However, the amount of direction and guidance provided by applicant is limited to the preparation of compounds of the formula I according to claim 1 wherein M is a Group VIIIB, particularly iron. See the examples of the instant specification. No examples are provided for the preparation of the organometallic complex of Formula I where M is a Group VIB metal. Here, extrapolation to compounds of the formula I, where M is a Group VIIIB, is proper since iron belongs to the Group VIIIB and therefore they are expected to have similar properties. However, Group VIB metals have different chemical and electronical

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properties from Group VIIIB metal and therefore their catalytic properties would also be different. Furthermore, the instant specification lacks guidance as to how to make compounds of the formula I where M is a Group VIB metal.

Therefore, the quantity of experimentation required to use the compounds as claimed, based on applicant's limited disclosure would be undue burden because one of ordinary skill in the art would have to perform a significant amount of experimentation to ascertain how to make the compounds of formula I, as recited in claim 1, where M is a group VIB metal since extrapolation from compounds of the formula I where M is iron is not proper.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claim 51 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 51 provides for the use of the compound of claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

### ***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claim 51 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PORFIRIO NAZARIO GONZALEZ whose telephone number is (571)272-0641. The examiner can normally be reached on Mon.-Fri. (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Porfirio Nazario-Gonzalez/

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